

Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

Claims 1-44 (Canceled).

45. (Currently amended) The method as claimed in claim 44 53 wherein said proton exchange membrane is a perfluorosulfonic acid proton exchange membrane.

Claims 46-47 (Canceled).

48. (Currently amended) The method as claimed in claim 44 53 wherein said one or more desired areas of the proton exchange membrane consist of the periphery of the proton exchange membrane.

49. (Currently amended) The method as claimed in claim 44 53 wherein said one or more desired areas of the proton exchange membrane comprise the periphery of the proton exchange membrane and one or more interior regions defining a plurality of circumscribed segments.

50. (Currently amended) The method as claimed in claim 44 53 wherein said polymerization effecting step comprises heating the product of step (b).

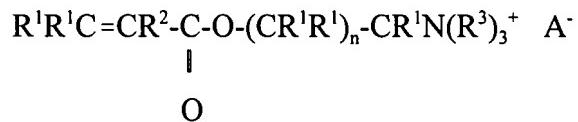
51. (Currently amended) The method as claimed in claim 44 53 wherein said polymerization effecting step comprises irradiating the product of step (b).

52. (Currently amended) The method as claimed in claim 44 53 wherein said polymerization effecting step comprises exposing the product of step (b) to a free-radical catalyst.

53. (Previously presented) A method of preparing a composite membrane, said method comprising the steps of:

(a) providing a proton exchange membrane;

(b) introducing a cationic monomer into one or more desired areas of the proton exchange membrane, wherein the cationic monomer is a quaternary salt monomer that includes a cationic component and an anionic component, said cationic component being selected from the group consisting of acrylic, methacrylic and ethynyl esters of quaternary ammonium alkanes and acrylic, methacrylic and ethynyl esters of quaternary ammonium heterocycles, and wherein the quaternary salt monomer is of the formula



wherein R^1 is selected from the group consisting of F and H, R^2 is selected from the group consisting of H, a methyl group and a halide, R^3 is selected from the group consisting of a methyl group and an ethyl group, n is 0-3, and A^- is an anion with which the cation exhibits solubility in water; and

(c) effecting the polymerization of the cationic monomer.

54. (Previously presented) The method as claimed in claim 53 wherein A^- is selected from the group consisting of sulfate and chloride.

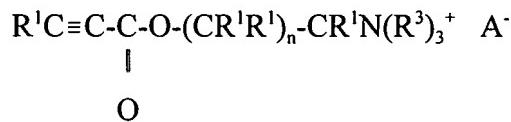
Claim 55 (Canceled).

56. (Previously presented) A method of preparing a composite membrane, said method comprising the steps of:

(a) providing a proton exchange membrane;

(b) introducing a cationic monomer into one or more desired areas of the proton exchange membrane, wherein the cationic monomer is a quaternary salt monomer that includes a cationic component and an anionic component, said cationic component being selected from the group consisting of acrylic, methacrylic and ethynyl esters of quaternary ammonium alkanes and

acrylic, methacrylic and ethynyl esters of quaternary ammonium heterocycles, and wherein the quaternary salt monomer is of the formula



wherein R¹ is selected from the group consisting of F and H, R² is selected from the group consisting of H, a methyl group and a halide, R³ is selected from the group consisting of a methyl group and an ethyl group, n is 0-3, and A⁻ is an anion with which the cation exhibits solubility in water; and

(c) effecting the polymerization of the cationic monomer.

57. (Previously presented) The method as claimed in claim 56 wherein A⁻ is selected from the group consisting of sulfate and chloride.

Claim 58 (Canceled).

59. (New) The method as claimed in claim 56 wherein said proton exchange membrane is a perfluorosulfonic acid proton exchange membrane.

60. (New) The method as claimed in claim 56 wherein said one or more desired areas of the proton exchange membrane consist of the periphery of the proton exchange membrane.

61. (New) The method as claimed in claim 56 wherein said one or more desired areas of the proton exchange membrane comprise the periphery of the proton exchange membrane and one or more interior regions defining a plurality of circumscribed segments.

62. (New) The method as claimed in claim 56 wherein said polymerization effecting step comprises heating the product of step (b).

63. (New) The method as claimed in claim 56 wherein said polymerization effecting step comprises irradiating the product of step (b).

64. (New) The method as claimed in claim 56 wherein said polymerization effecting step comprises exposing the product of step (b) to a free-radical catalyst.